

NECAP SCIENCE 2007 GRADE 11 RELEASE ITEMS ALIGNMENT

Item #	GE Connection	Target Code	Domain	Target	Depth of Knowledge
1	S9-12:10	PS1.4 MAS, FAF	Physical Science	Students model or explain how the structure of an atom or an atom's electron configuration determines how that atom can interact with other atoms	2
2	S9-12:15, 16	PS2.6 INQ, SAE	Physical Science	Using information provided, Students will draw conclusions and explain the energy flow in a given chemical reaction.	2
3	S9-12:24	PS2.7 SAE	Physical Science	Students explain relationships between and among electric charges, magnetic fields, electromagnetic forces and atomic particles.	2
4	S9-12: 21,22	PS3.8 POC, INQ	Physical Science	Students will use the relationships among force, mass, velocity, momentum and acceleration to predict and explain the motion of objects.	3
5	S9-12: 46	ESS1.3 SAE, POC	Earth/Space Science	Students explain how internal and external sources of heat (energy) fuel geologic processes.	2
6	S9-12: 18	ESS1.4 POC, MAS	Earth/Space Science	Students relate how geologic age is determined using various dating methods.	2
7	S9-12: 44	ESS3.5 NOS	Earth/Space Science	Students explain how scientific theories about the structure of the universe have been advanced through the use of sophisticated technology.	1
8	S9-12: 12	LS1.1 SAE, FAF	Life Science	Students use data and observation to make connections between, to explain or to justify how specific cell organelles produce/regulate what the cell needs.	2
9	S9-12: 40	LS1.2 FAF, POC	Life Science	Students explain or justify with evidence how the alteration of the DNA sequence may produce new gene combinations.	2
10	S9-12: 34, 35	LS2.4 POC, SAE	Life Science	Students trace the cycling of matter and the flow of energy in a living system from its source through transformation in cellular, and biochemical processes.	2
11	S9-12: 3,4	INQ 2.5	Inquiry	Develop an organized and logical approach to investigating the question, including controlling variables	2
12	S9-12: 1,2	INQ1.1	Inquiry	Analyze information from observations, research or experimental data for the purpose of formulating a question, hypothesis, or prediction.	3
13	S9-12: 5	INQ 3.8	Inquiry	Use accepted methods for organizing, representing, and manipulating data.	2
14	S9-12: 6	INQ 4.11	Inquiry	Analyze data, including determining if data are relevant, artifact, irrelevant or anomalous (specify relationships between facts; ordering classifying data).	2
15	S9-12: 5	INQ 3.8	Inquiry	Use accepted methods for organizing, representing, and manipulating data.	3
16	S9-12: 7, 8	INQ 4.12	Inquiry	Use evidence to support and justify interpretations and conclusions or explain how the evidence refutes the hypothesis.	3
17	S9-12: 7, 8	INQ 2.5	Inquiry	Develop an organized and logical approach to investigating the question, including controlling variables.	3